

# P600A/P6A05 THRU P600M/P6A10

## 6.0 AMPS. SILICON RECTIFIERS

**Voltage Range**  
50 to 1000 Volts  
**Current**  
6.0 Amperes

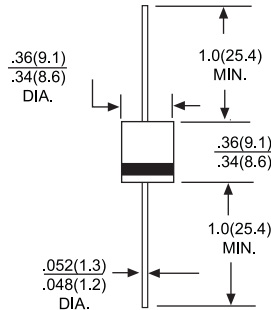
### Features

- Plastic material used carries Underwriters Laboratory Classification 94V-0
- High forward current capability
- High surge current capability
- High temperature soldering guaranteed: 250°C/10 seconds/.375"(.9.5mm) lead lengths at 5 lbs.(2.3kg) tension

### Mechanical Data

- Cases:Molded plastic
- Lead:Plated axial leads,solderable per MIL-STD-750,Method 2026
- Polarity:Color band denotes cathode end
- Mounting position:Any
- Weight:0.07 ounce,2.1grams

R-6



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

Type Number		P600A P6A05	P600B P6A1	P600D P6A2	P600G P6A4	P600J P6A6	P600K P6A8	P600M P6A10	UNITS
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	v
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	v
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at T <sub>A</sub> = 60°C, 0.375"(9.5mm) Lead Length (Fig 1) T <sub>L</sub> = 60°C, 0.125"(3.1mm) Lead Length (Fig 2)	I <sub>F(AV)</sub>	6.0 22.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated LoadM (JEDEC method)	I <sub>FSM</sub>	400.0							A
Maximum Instantaneous Forward Voltage @6.0A @100A	V <sub>F</sub>	1.0							V
Maximum DC Reverse Current @ T <sub>A</sub> = 25°C at Rated DC Blocking Voltage @ T <sub>A</sub> = 100°C	I <sub>R</sub>	5.0 1.0							uA mA
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	150.0							pF
Typical Reverse Recovery Time (Note 2)	T <sub>RR</sub>	2.5							us
Typical Thermal Resistance (Note 3)	R <sub>θJA</sub> R <sub>θJC</sub>	20.0 4.0							°C/W
Operating Junction and Storage Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>	-50 to +150							°C

NOTES: 1. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.  
2. Reverse Recovery Time Conditions:I<sub>F</sub>=0.5a,I<sub>R</sub>=1.0a,I<sub>RR</sub>=0.25a  
3. Thermal Resistance from Junction to Ambient and from Junction to Lead at 0.375"(9.5mm) Lead Length, P.C.B. Mounted with 1.1 x1.1"(30 x30mm) Copper Pads

# RATING AND CHARACTERISTIC CURVES P600A/P6A05 THRU P600M/P6A10

FIG.1-MAXIMUM FORWARD CURRENT DERATING CURVE

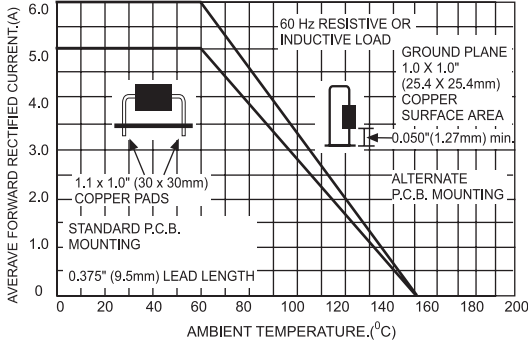


FIG.2-MAXIMUM FORWARD CURRENT DERATING CURVE

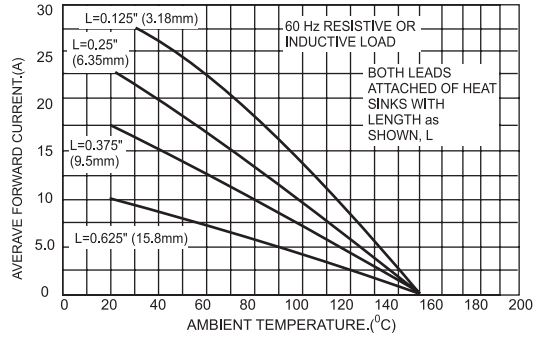


FIG.3-TYPICAL REVERSE CHARACTERISTICS

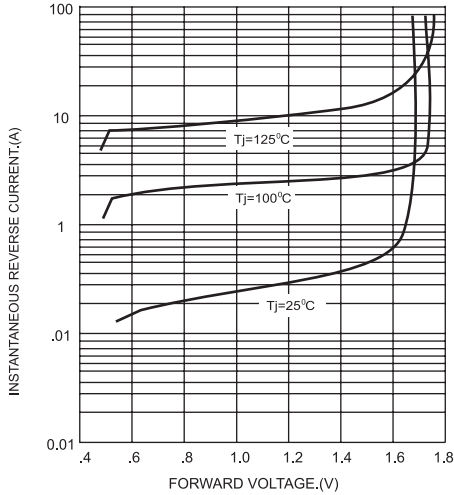


FIG.4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

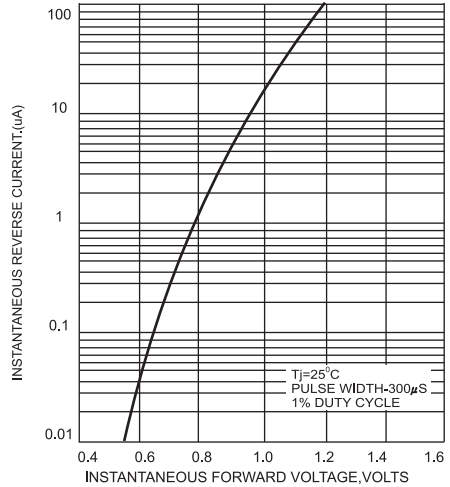


FIG.5-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

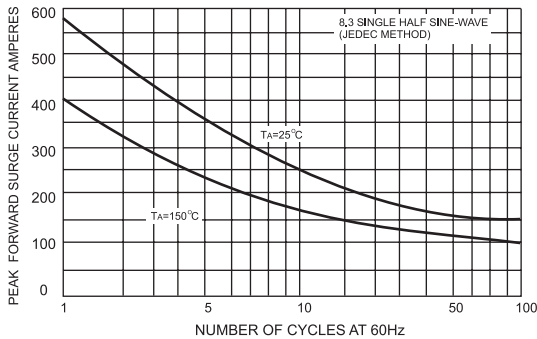


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

